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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,875	12/03/1999	NACERDINE AZZI	RCA-89342	4350

7590

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EXAMINER

ZIMMERMAN, GLENN

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/454,875

Applicant(s)

AZZI ET AL.

Examiner

Glenn Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-7 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-7 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 16 June 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

## **DETAILED ACTION**

### ***Response to Amendment***

Response, filed on June 16, 2003, has been entered and acknowledged by the examiner.

### ***Allowable Subject Matter***

The indicated allowability of claim 7 is withdrawn in view of the newly discovered reference(s) to Dekkers et al. U.S. Patent 5,550,522. Rejections based on the newly cited reference(s) follow.

### ***Drawings***

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on June 16, 2003 have been approved.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Dekkers et al. U.S. Patent 5,550,522.

Regarding claim 22, Dekkers et al. discloses a deflection yoke (**an electromagnetic deflection unit Fig. 1 ref. 5**) for a cathode-ray tube comprising: a pair of horizontal deflection coils (**line deflection coils Fig. 2 ref. 10a and 10b**) and a pair of vertical deflection coils (**field deflection coils ref. 7**) for generating magnetic deflection fields perpendicular to a main axis of the cathode-ray tube, one of the pairs including saddle-shaped coils (**col. 4 line 57 and 64**) having conducting wires arranged so as to form a front conductor assembly (**Fig. 5 ref. 10a front portion under 16a; col 1 line 1; col. 5 lines 1-5**) and a rear conductor assembly coupled (**Fig. 1 ref. 7 rear part or rear part of Fig. 2 ref. 10a and 10b no ref. #; col. 5 lines 1-5**) to each other by lateral conductor bundles (**Fig. 1 ref. 7 bundle sections shown and Fig. 2 ref. 10a and 10b bundle sections shown; col. 4 lines 66-67; col. 5 lines 1-5**), and those parts of each of the coils which form the rear conductor assembly and the lateral bundles being arranged approximately symmetrically with respect to a plane (**Fig. 2 no ref. #; Fig. 1 ref. 7 no ref. #**); and

A first metal plate (**preformed premagnetized elements of permanent magnetic ferrite ref. 14**) placed near (**annular support Fig. 5 ref. 13; Fig. 3; Fig. 7**) the front conductor assembly for locally modifying one of the direction and the amplitude of the magnetic field created by the current flow in the front conductor assembly so that, considering a first zone of the front conductor assembly and a second zone symmetrical

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with the first zone with respect to the plane (**Fig. 2 shows symmetry**), the fields created in the first and second zones are asymmetrical with respect to the plane (**col. 1 lines 24-30**).

Regarding claim 6, Dekkers et al. discloses a deflection yoke according to claim 22, wherein the first metal plate extends, in a plane perpendicular to the Z axis, about a mean radial direction of between 60 degrees and 90 degrees measured with respect to the direction of the plane of separation of the two coils of the same pair (**Fig. 3**). Figure 3 clearly shows that there are several metal plates one can choose in the 60 to 90 degree range.

Regarding claim 7, Dekkers et al. discloses a deflection yoke according to claim 22, further comprising a second metal plate wherein the first and second metal plate extend on both of the saddle-shaped coils of the same pair, symmetrically with respect to the Z axis (**Fig. 3 and 5; col. 5 lines 58-59; col. 5 line 9**). Figure 3 clearly shows the symmetry of the structure. Figure 5 shows how they extend on the saddle-shaped coils.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dekkers et al. U.S. Patent 5,550,522 in view of Barkow et al. U.S. Patent 3,721,930.

Regarding claim 5, Dekkers et al. teaches all the limitations of claim 5, but fails to teach a deflection yoke wherein the saddle-shaped coils are the vertical deflection coils. Barkow in the analogous art teaches wherein the saddle-shaped coils are vertical deflection coil. Additionally, Barkow teaches incorporation of such a coil to improve deflecting of electron beams (**col. 8 lines 62-67**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a vertical deflection coil in the saddle-shaped coil of Dekkers et al. since such a modification would improve deflecting of electron beams as taught by Barkow.

Claims 22, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatte French Patent Application Publication 2034201 in view of Barkow et al. U.S. Patent 3,721,930.

Regarding claim 22, Hatte teaches a deflection yoke (**deflection coil ref. 2**) for a cathode-ray tube (**page 2 paragraph 5**) a first metal plate (**a thin slug of divided iron ref. 3 or thin layer of a suitable magnetic material powdered iron or ferrite**) placed near the front conductor assembly (**ref. A shows that the thin slug can be placed longitudinal to the neck and near the front conductor assembly**) for locally modifying one of the direction and the amplitude of the magnetic field created by the current flow in the front conductor assembly so that considering a first zone of the front conductor assembly and a second zone symmetrical with the first zone with respect to

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the plane, the fields created in the first and second zone symmetrical with the first zone with respect to the plane, the fields created in the first and second zones are asymmetrical with respect to the plane (**the slug can be placed anywhere along ref. A or B for transverse motion**), but fail to teach a pair of horizontal deflection coils and a pair of vertical deflection coils for generating magnetic deflection fields perpendicular to a main axis of the cathode-ray tube, one of the pairs including saddle-shaped coils having conducting wires arranged so as to form a front conductor assembly and a rear conductor assembly coupled to each other by lateral conductor bundles, and those parts of each of the coils which form the rear conductor assembly and the lateral bundles being arranged approximately symmetrically with respect to a plane. Barkow et al. in the analogous art teach a pair of horizontal deflection coils (**col. 2 lines 36-40**) and a pair of vertical deflection coils (**col. 2 lines 36-40**) for generating magnetic deflection fields perpendicular to a main axis of the cathode-ray tube, one of the pairs including saddle-shaped coils (**col. 2 lines 36-40**) having conducting wires arranged so as to form a front conductor assembly (**transverse conductor ref. 37**) and a rear conductor assembly (**transverse end turns ref. 38**) coupled to each other by lateral conductor bundles (**side conductors ref. 36**), and those parts of each of the coils which form the rear conductor assembly and the lateral bundles being arranged approximately symmetrically with respect to a plane (**Fig. 7**). Additionally, Barkow teaches incorporation of such a deflection coil setup to improve deflecting of electron beams vertically and horizontally (**col. 8 lines 62-67**).

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Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a pair of horizontal deflection coils and a pair of vertical deflection coils for generating magnetic deflection fields perpendicular to a main axis of the cathode-ray tube, one of the pairs including saddle-shaped coils having conducting wires arranged so as to form a front conductor assembly and a rear conductor assembly coupled to each other by lateral conductor bundles, and those parts of each of the coils which form the rear conductor assembly and the lateral bundles being arranged approximately symmetrically with respect to a plane in the deflection of Hatte since such a modification would improve the deflecting of electron beams vertically and horizontally as taught by Barkow.

Regarding claim 5, Hatte teaches all the limitations of claim 5, but fails to teach wherein the saddle-shaped coils are the vertical deflection coils. Barkow et al. in the analogous art teach wherein the saddle-shaped coils are the vertical deflection coils **(col. 2 lines 36-40)**. Additionally, Barkow teaches incorporation of such a saddle-shaped vertical deflection coil setup to improve deflecting of electron beams **(col. 8 lines 62-67)**.

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the saddle-shaped vertical deflection coil in the deflector of Hatte since such a modification would improve deflecting of electron beams as taught by Barkow.

Referring to claim 6, Hatte teach all of the limitations of the claim. Hatte teaches a deflection yoke according to claim 22, wherein the first metal plate extends, in a plane



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perpendicular to the z axis about a mean radial direction of between 60 degrees and 90 degrees measured with respect to the direction of the plane of separation of the two coils of the same pair. Ref. B (**page 2 paragraph 7**) shows that the first metal plate can be moved transversely from 0 to 180 degrees, so the mean radial direction of Hatte covers between 60 and 90 degrees.

### ***Response to Arguments***

Applicant's arguments with respect to claims 22, 5 and 6 have been considered but are moot in view of the new ground(s) of rejection.

The applicant asserts that the Hatte reference does not teach anything about the location of the plate 3. The examiner notes that there are A and B arrows in the figure of the '201 reference that show that the plate reference 3 can be positioned near the front. The examiner notes that the arrows A and B suggests placing the metal plate near the front conductor assembly as there are clearly a large number of locations that the plate can be placed. The examiner notes that the '201 reference states that "In the example shown, a tab 4, advantageously of plastic, is operative to move the slug 3 manually in a plane that can be longitudinal to the neck of the tube or alternatively transverse thereto, as indicated respectively by arrows A and B".

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamura U.S. Patent 4,618,842 discloses an Electron Beam Deflection Yoke.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (703) 308-8991. The examiner can normally be reached on M-F.

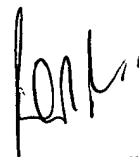
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is n/a.



Glenn D. Zimmerman

8/27/03



NIMESHKUMAR D. PATEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800